

IN THE CLAIMS:

1. (Currently Amended) A method of cleaning a treatment chamber, comprising:
forming a material including a metal inside the chamber;
vaporizing a cleaning agent comprising one of a carboxylic acid and a derivative of carboxylic acid;
supplying a the vaporized cleaning agent ~~including one of a carboxylic acid and a derivative of carboxylic acid~~ into the chamber such that the vaporized cleaning agent contacts the material to form a metal complex of the metal and the cleaning agent; and
subliming the metal complex by using a heat source.
2. (Canceled)
3. (Currently Amended) The method of cleaning of claim 1, wherein the cleaning agent ~~[[is]]~~ comprises a compound selected from the group comprising ~~[[:]]~~ RCOOH, RCOOR', and R(COOH)_n ~~[[(:)] , wherein R, R' are hydrocarbon groups containing halogen atoms, and wherein n being is an integer], and a composition thereof.~~
4. (Previously Presented) The method of cleaning of claim 1, wherein the cleaning agent comprises trifluoroacetic acid.
5. (Previously Presented) The method of cleaning of claim 1, wherein the treatment chamber is a component of one of a chemical vapor deposition equipment and a physical vapor deposition equipment.
6. (Previously Presented) The method of cleaning of claim 1, wherein the metal is copper.
7. (Currently Amended) The method of cleaning of claim 1, further comprising supplying an additive to the vaporized cleaning agent to promote formation of the metal complex of the cleaning agent and the metal.

8. (Previously Presented) The method of cleaning of claim 7, wherein the additive includes oxygen.
9. (Currently Amended) A method of cleaning a treatment chamber, comprising:
forming a material including a metal inside the chamber;
vaporizing a cleaning agent comprising one of a carboxylic acid and a derivative of a carboxylic acid;
supplying a the vaporized cleaning agent ~~including one of a carboxylic acid and a derivative of carboxylic acid~~ into the chamber such that the vaporized cleaning agent contacts the material to form a metal complex of the metal and the cleaning agent;
subliming the metal complex by using a heat source; and
repeating said vaporizing the cleaning agent, repeating said supplying a the vaporized cleaning agent, and repeating said subliming the metal complex.
10. (Canceled)
11. (Withdrawn) Treatment equipment, comprising:
a treatment chamber for treating a substrate;
a susceptor disposed in the treatment chamber and on which the substrate is disposed;
a treatment gas supply system for supplying, in the treatment chamber, a treatment gas containing copper as a component;
an evacuation system for evacuating the inside of the treatment chamber; and
a TFA supply system for supplying trifluoroacetic acid in the treatment chamber.
12. (Withdrawn) The treatment equipment of claim 11:
wherein the treatment gas supply system comprises a treatment agent tank, treatment gas supply piping connecting the treatment chamber and the treatment agent tank and a treatment agent vaporizer disposed in the middle of the treatment gas supply piping;
wherein the TFA supply system comprises a TFA tank and a TFA supply piping connecting the TFA tank and the treatment gas supply piping, the treatment gas supply piping being downstream the treatment agent vaporizer in a direction of treatment gas movement.

13. (Withdrawn) The treatment equipment of claim 12:
wherein at least in a portion downstream the vaporizer of the treatment agent supply piping a heater is disposed.
14. (Withdrawn) The treatment equipment of claim 13:
wherein the treatment chamber is furnished with a heater to heat a wall surface of the treatment chamber.
15. (Withdrawn) The treatment equipment of claim 12:
wherein the treatment agent tank is a tank containing copper as a component.
16. (Withdrawn) The treatment equipment of claim 11, further comprising:
a supply system for supplying an additive that promotes complexing of copper.
17. (Currently Amended) A method of removing a material including a metal comprising:
vaporizing a cleaning agent comprising one of a carboxylic acid and a derivative of carboxylic acid;
forming a metal complex by contacting a the vaporized cleaning agent ~~including one of a carboxylic acid and a derivative of carboxylic acid~~ with the material including the metal;
and
subliming the metal complex with a heat source.
18. (Currently Amended) The method of ~~cleaning~~ removing of claim 17, wherein, in said subliming the metal complex, the metal complex is heated at a temperature of at least 150°C.
19. (Currently Amended) The method of ~~cleaning~~ removing of claim 17, wherein, in said forming a metal complex, ~~the cleaning agent is vaporized to form a vaporized cleaning agent~~ and the pressure of the vaporized cleaning agent is at least ~~100~~ 10 Torr.
20. (Canceled)

21. (Currently Amended) The method of cleaning of claim 1, further comprising:
confirming the existence of the material inside the chamber; and
repeating said vaporizing the cleaning agent, repeating said supplying a the vaporized
cleaning agent, and repeating said subliming the metal complex, if the existence of material
inside the chamber is confirmed.